



OUT19/14077

Nathan Heath
Planning Officer, Transport Assessments
NSW Department of Planning and Environment

Nathan.Heath@planning.nsw.gov.au

Dear Mr Heath

**M12 Motorway (SSI 9364)
EIS Exhibition**

I refer to your email of 16 October 2019 to the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) about the above matter.

The following advice for you to consider is from DPIE Water and NRAR. Please note the Department of Primary Industries (DPI) and Crown Lands now provide a separate response.

Water Balance

The project has conservatively estimated a maximum take of groundwater of 2.46 ML/year (Appendix N section 5.1.8); DPIE-Water expect all estimated take of groundwater be included in the Water Balance. Project Water Balance as presented is more an estimated water demand for the project.

Operation Monitoring

Groundwater monitoring during the operational phase is limited to the first six months, with a final assessment of the impacts after that. DPIE-Water are of the opinion that this is an insufficient period of time to assess the operational motorway impacts on groundwater as it does not allow for seasonal variation. Groundwater monitoring during the operational phase should be for a full 24 months period to enable assessment of impacts against two full seasonal changes.

The proponent should note the rare and vulnerable river systems nearby such as the chain of ponds.

Prior to approval

- Develop and include an updated water balance to reflect water input to project (including projected water use, rainfall catchment / retention) plus output water from project (including rainwater runoff and groundwater discharge).
- Incorporate 24 months of groundwater monitoring as a minimum during the operational phase, followed by assessment of the monitoring data.
- The EA has identified the potential to realign streams classified as second order and above. As a result, this proposal is not in accordance with the Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).
- The EA should provide additional information on streams impacted by the proposed works and mitigation measures to manage these impacts. For example, a third order stream off Kemps Creek is to be impacted however the EA does provide clear description of the impacts in the context of the CAA Guidelines or discuss mitigation measures. The proponent needs to provide a map identifying all streams and stream orders and describe how these works are aligned with the Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).

Post approval

- The Construction Soils and Water Management Plan (SWH05), with included scour protections, should be developed in consultation with DPIE Water, and should take account of vulnerable receiving systems. Post-development stream in-flows must be constrained to pre-development limits to avoid physical disturbance in vulnerable streams.
- Include in the Construction Soils and Water Management Plan an updated assessment of the groundwater monitoring, with monitoring data attached.
- Geomorphic monitoring should be included in the post-construction monitoring program, specifically looking for erosion, bed incision and channel adjustment.
- All stream diversions should be rehabilitated after realignment in accordance with *A Rehabilitation Manual for Australian Streams* (Rutherford, Jerie and Marsh; LWRDC 2000) or similar.
- The flow models (SWH12) predictions should be compared with actual flows after three years post-construction, the comparison should include a large rain event. Model recalibration will be necessary where the stated margin of error is exceeded.

Any further referrals to DPIE – NRAR & Water can be sent by email to:

landuse.enquiries@dpi.nsw.gov.au.

Any further referrals to DPI & Crown Lands can be sent by email to: dpi.cabinet@dpi.nsw.gov.au & lands.ministerials@industry.nsw.gov.au respectively.

Yours sincerely



Liz Rogers
Manager, Assessments
Water – Strategic Relations
7 January 2020